

have confirmed 383 human cases with a fatality rate of 63% (241/383) as per WHO May 2008 data. The major share is from three South East Asian (SEA) countries—Vietnam, Thailand and Indonesia, which together accounted to 177 deaths from 264 cases. Poultry sector contributes 1.2–2.4% of GDP in East Asian and Pacific countries. Bird flu has encroached poultry trade in South East Asia killing more than 120 million birds with a gross economic loss of US\$10 billion compared to 300 million birds killed globally with economic loss of US\$20 billion (0.5–1% fall in GDP) since 2003. The impact extends not only to poultry farmers but also to upstream and downstream sectors (poultry trade, breeding farms, tourism etc.). A recent analysis has projected that a future pandemic could kill 5–150 million people leading to a 3.1–5.1% loss of world GDP (US\$1.2–2 trillion). **CONCLUSIONS:** Health and economic losses have posed a major challenge to South East Asia. Appropriate and timely measures are required to prevent a future pandemic which could be devastating to Asia and rest of the world.

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GENITAL WARTS IN ITALY: A COST OF ILLNESS ANALYSIS

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OBJECTIVES: Human Papilloma Virus (HPV) is responsible for both benign and malignant genital disease. The objective of this study was to review the available epidemiological and cost information for genital warts (GW), with a focus on the female population, the current target for HPV vaccination in Italy. **METHODS:** The study analyzed scientific literature, data from the Italian Centres of Surveillance of Sexually Transmitted Infections (MST), the National Hospital Discharge and the National Drug Utilisation databases. National tariffs for ambulatory visits, hospitalizations and drugs costs were used to estimate the overall cost of GW disease for the Italian National Health System (NHS). The overall cost for prevention and treatment of cervical cancer was taken from La Torre 2007. **RESULTS:** No Italian specific publications were found regarding GW epidemiology; however from applying European incidence rates to the female Italian population, 30,000 new GW cases/year were estimated. According to MST data, there were 8,000 public clinic visits relating to female GWs (20,000 visits for male GWs), suggestive of a considerable use of private gynaecologists. In 2004 hospitalizations due to female GWs totalled 512 plus 1728 day-admissions. Including the cost of the specific medicines (approx. €2.4 M/year for imiquimod), the overall cost to the Italian NHS was estimated as €4.3 M per year for the diagnosis and treatment of female GWs (approx. 9.2M € for the whole population). Using data from Merito (ISPOR Dublin 2007) estimating the average cost for outpatient management of GWs as €147/case, the total expenditure for the management of the GWs in the Italian female population could be up to €7.1 M. **CONCLUSIONS:** The NHS expenditure for the management of GW in the Italian female population was estimated to represent 2.1–4.4% of the total expenditure for prevention and treatment of HPV-related cervical cancer disease.

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THE ECONOMIC BURDEN OF HCV AND HBV CO-INFECTION: EVIDENCE FROM UNITED STATES MANAGED CARE DATA

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OBJECTIVES: Chronic Hepatitis C virus (HCV) and Hepatitis B virus (HBV) are the two leading causes of liver disease in the world. Approximately 2%–10% of HCV patients worldwide are estimated to also have HBV, resulting in greater disease burden. We analyze insurance claims to assess resource use and costs among managed care enrollees with chronic HCV and HBV co-infection compared to those with chronic HCV alone. **METHODS:** A US claims database spanning the period January 1, 2002 to December 31, 2006 was retrospectively analyzed. Patients were classified into 2 groups: 1) chronic HCV without HBV or HIV (N = 27,296), and 2) chronic HCV and HBV co-infection without HIV (N = 2,525). An index date was set as the date of the first observed chronic HCV diagnosis or date of diagnosis of co-infection. Patients had continuous plan enrollment for ≥3 months pre- and ≥12 months post-index. Mean per patient use and costs of all medical and pharmacy services were assessed over 12 months post-index. **RESULTS:** Patients with HCV alone had 61 encounters and total cost of \$20,258 compared to 67 encounters and total cost of \$23,494 for co-infected patients (P < 0.05). Hospitalization rates were similar across the groups but, per patient hospital costs were more than \$2000 greater for co-infected patients (P < 0.05). Co-infected patients stayed longer in the hospital (9.2 vs. 7.6 days, P < 0.05) and also had higher costs for laboratory services and other outpatient/ ancillary services (both P < 0.05). There were no significant differences in encounters and costs related to physician office and emergency department visits. After controlling for demographics and comorbidities in multivariate analyses, co-infected patients had 4.4 more encounters and incurred \$1885 more in total costs compared to those with HCV alone (P < 0.05). **CONCLUSIONS:** Chronic HCV and HBV co-infection leads to significantly greater consumption of health care resources and imposes greater burden on managed care compared to chronic HCV alone.

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INPATIENT COSTS AND OUTCOMES ASSOCIATED WITH HEPATITIS C, HUMAN IMMUNODEFICIENCY VIRUS, AND CO-INFECTION WITH BOTH IN THE UNITED STATES

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OBJECTIVES: We generate national estimates of inpatient costs, length of stay (LOS), and probability of death among patients infected with Hepatitis C Virus (HCV), human immunodeficiency virus (HIV), and those co-infected with both. **METHODS:** Discharge data from the 2005 HCUP Nationwide Inpatient Sample, the largest all-payer inpatient care database in the United States (US) were analyzed. Hospitalizations were categorized into mutually exclusive groups based on ICD-9-CM diagnosis codes: HCV only, HIV only, HCV and HIV, and no HCV or HIV. Weighted estimates of LOS, costs, and probability of death were calculated for each stay. **RESULTS:** There were 390,975 hospitalizations for HCV, 136,596 for HIV, and 26,000 for HCV and HIV co-infections. The average LOS for HCV-related hospitalizations was 6.03 days. LOS for HIV-related hospitalizations was higher at 7.87 days (P < 0.0001), similar to the LOS for hospitalizations pertaining to HCV and HIV co-infection (7.88 days). In comparison, hospitalizations not related to HCV or HIV had